

1 What is claimed is:

2 1. An apparatus for making a cigarette smoking article, comprising:
3 a cigarette maker having a garniture and a bobbin for paying out a strip of a paper
4 wrapper to the garniture for wrapping about smokable material to form a cigarette rod; and
5 an adhesive applicator apparatus for applying bands of an adhesive to the paper wrapper,
6 the adhesive applicator apparatus comprising a pair of counter-rotating rollers arranged between
7 the bobbin and the garniture.

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9 2. The apparatus of claim 1, wherein the adhesive applicator apparatus comprises:
10 a pattern roller,
11 an application roller, and
12 an adhesive feed shoe arranged to deposit the adhesive on the pattern roller immediately
13 upstream of a nip between the rollers,
14 the pattern roller and the application roller each having a peripheral surface,
15 the rollers adapted to contact the peripheral surfaces with one another for transferring the
16 adhesive from the pattern roller to the application roller,
17 the application roller and the paper wrapper adapted to contact the peripheral surface of
18 the application roller with the paper wrapper for applying the adhesive transferred from the
19 pattern roller to the paper wrapper.

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21 3. The apparatus of claim 2, further comprising a drip box enclosing a lower portion of the
22 rollers for catching adhesive from the rollers.

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24 4. The apparatus of claim 2, further comprising a means for engaging the peripheral
25 surfaces of the rollers.

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27 5. The apparatus of claim 2, wherein the application roller is positioned to bear against the
28 paper wrapper to transfer the adhesive to the wrapper.

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30 6. The apparatus of claim 2, wherein the pattern roller further comprises a plurality of
31 transverse grooves spaced circumferentially about the peripheral surface of the pattern roller.

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2 7. The apparatus of claim 6, wherein each groove is adapted to contain a predetermined
3 amount of the adhesive.

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5 8. The apparatus of claim 1, wherein the bands comprise a longitudinally spaced, cross-
6 directional pattern, the bands having a predetermined width and spacing.

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8 9. The apparatus of claim 1, further comprising a dryer arranged between the adhesive
9 applicator apparatus and the garniture for drying the adhesive applied to the paper.

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11 10. The apparatus of claim 9, wherein the dryer comprises an infrared dryer.

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13 11. The apparatus of claim 1, further comprising a heater arranged between the bobbin and
14 the adhesive applicator apparatus for preheating the paper wrapper.

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16 12. The apparatus of claim 11, wherein the heater comprises an infrared heater.

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18 13. The apparatus of claim 1, the paper wrapper having an inside surface and an outside
19 surface, wherein the adhesive applicator apparatus is arranged to apply the bands of adhesive to
20 the inside surface of the paper wrapper.

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22 14. The apparatus of claim 1, the paper wrapper having an inside surface and an outside
23 surface, wherein the adhesive applicator apparatus is arranged to apply the bands of adhesive to
24 the outside surface of the paper wrapper.

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26 15. An apparatus for making a cigarette smoking article, comprising:
27 a cigarette maker having a garniture and a bobbin for paying out a strip of a paper
28 wrapper to the garniture for wrapping about a rod of smokable material to form a cigarette rod;
29 and

1 an adhesive applicator apparatus arranged between the bobbin and the garniture for
2 applying bands of an adhesive to the paper wrapper, the adhesive applicator apparatus further
3 comprising
4 (a) a pattern roller having a peripheral surface with a plurality of transverse grooves
5 spaced circumferentially about the peripheral surface of the pattern roller, each groove adapted to
6 contain a predetermined amount of the adhesive,
7 (b) an application roller having a peripheral surface,
8 (c) an adhesive feed shoe arranged to deposit the adhesive on the pattern roller
9 immediately upstream of a nip between the rollers,
10 (d) the rollers being adapted to contact the peripheral surfaces with one another for
11 transferring the adhesive from the pattern roller to the application roller, and
12 (e) the application roller and the paper wrapper being adapted to contact the peripheral
13 surface of the application roller with the paper wrapper for applying the adhesive transferred
14 from the pattern roller to the paper wrapper,
15 wherein the bands comprise a predetermined width and spacing and a longitudinally
16 spaced, cross-directional pattern.

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18 16. An apparatus for applying bands of an adhesive to a paper wrapper in a cigarette maker
19 having a garniture and a bobbin for paying out a strip of the paper wrapper to the garniture for
20 wrapping about smokable material to form a cigarette rod, the apparatus comprising:
21 a pair of counter-rotating rollers arranged between the bobbin and the garniture.

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23 17. The apparatus of claim 16, further comprising:
24 a pattern roller,
25 an application roller, and
26 an adhesive feed shoe arranged to deposit the adhesive on the pattern roller immediately
27 upstream of a nip between the rollers,
28 the pattern roller and the application roller each having a peripheral surface,
29 the rollers adapted to contact the peripheral surfaces with one another for transferring the
30 adhesive from the pattern roller to the application roller,

1 the application roller and the paper wrapper adapted to contact the peripheral surface of
2 the application roller with the paper wrapper for applying the adhesive transferred from the
3 pattern roller to the paper wrapper.
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5 18. The apparatus of claim 17, further comprising a means for engaging the peripheral
6 surfaces of the rollers.
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8 19. The apparatus of claim 17, wherein the application roller is positioned to bear against the
9 paper wrapper to transfer the adhesive to the wrapper.
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11 20. The apparatus of claim 17, wherein the pattern roller further comprises a plurality of
12 transverse grooves spaced circumferentially about the peripheral surface of the pattern roller.
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14 21. The apparatus of claim 20, wherein each groove is adapted to contain a predetermined
15 amount of the adhesive.
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17 22. The apparatus of claim 17, wherein the bands comprise a longitudinally spaced, cross-
18 directional pattern, the bands having a predetermined width and spacing.
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20 23. An apparatus for applying an additive material to a strip of a paper wrapper within a
21 cigarette maker, the apparatus comprising:

22 a transfer roller having a peripheral surface;

23 an application roller having a peripheral surface;

24 a means for supplying the additive material to a portion of the peripheral surface of the
25 transfer roller;

26 a means for transferring the additive material from the peripheral surface of the transfer
27 roller to predetermined locations on the peripheral surface of the application roller; and

28 a means for transferring the additive material from the predetermined locations on the
29 peripheral surface of the application roller to predetermined locations on the paper wrapper strip.
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